

**ANNUAL ACTUARIAL REPORT REQUIRED BY
RAILROAD RETIREMENT ACT OF 1974 AND
RAILROAD RETIREMENT SOLVENCY ACT OF 1983**

I. INTRODUCTION

Section 22 of the Railroad Retirement Act of 1974 and Section 502 of the Railroad Retirement Solvency Act of 1983 require the Railroad Retirement Board to prepare an annual report on the actuarial status of the railroad retirement system. The report must be submitted to the President and the Congress by July 1. The report must contain recommendations for any financing changes which might be advisable, including (1) changes in the tax rates and (2) whether any part of the taxes on employers should be diverted to the Railroad Unemployment Insurance Account to aid in the repayment of debt to the Railroad Retirement Account.

This report is intended to meet the requirements of Section 22 and Section 502 for 1996.

II. RAILROAD EMPLOYMENT

Over the years, the main source of income to the railroad retirement system has been a payroll tax on railroad employment. The amount of income that the tax produces is directly dependent on the number of railroad employees covered under the system.

An abbreviated history of average railroad employment from 1955 through 1995 is shown in the following table.

<u>Year</u>	<u>Average employment for year</u>	<u>Average annual rate of decline for the 5-year period beginning with the year</u>
1955	1,239,000	6.0%
1960	909,000	3.7
1965	753,000	3.2
1970	640,000	3.1
1975	548,000	0.6
1980	532,000	6.9
1985	372,000	4.5
1990	296,000	2.3
1995	264,000	

Between 1955 and 1995, the average annual rate of decline was 3.8 percent. Since 1990, average employment and rates of decline have been as follows:

<u>Year</u>	<u>Average employment for year</u>	<u>Annual rate of decline from previous year</u>
1991	285,000	3.7%
1992	276,000	3.2
1993	271,000	1.8
1994	266,000	1.8
1995	264,000	0.8

Two things become clear from the figures shown -- (1) railroad employment has continued to decline over a long period of years, and (2) the rate of decline has been irregular.

Three employment assumptions were used in the 19th actuarial valuation, which served as the 1994 annual report required by Section 502. Employment assumptions I and II were based on the model developed by the Association of American Railroads, and assumed that (1) passenger employment will remain at the level of 46,000, and (2) the employment base, excluding passenger employment, will decline at a constant annual rate (2.0 percent for assumption I and 3.5 percent for assumption II) for 25 years, at a reducing rate over the next 25 years, and remain level thereafter. Employment assumption III differed from employment assumptions I and II by assuming that (1) passenger employment will decline to 30,000 evenly over a 32-year period and then remain level, and (2) the employment base, excluding passenger employment, will decline at a constant annual rate of 5.0 percent for 25 years, at a reducing rate over the next 25 years, and remain level thereafter.

The 1995 annual report continued the use of the three employment assumptions, updating them as to current employment levels and providing for anticipated reductions in Amtrak employment.

The projected average employment for 1995, based on the three employment assumptions used in the 1995 annual report, ranged from 252,000 to 259,000. The actual average employment for 1994 was 264,000 (subject to later adjustment), which exceeds the projected amounts. Based on this result and the relative stability in recent annual employment declines, it was decided to use 1995 average employment as a starting point in this year's report and continue the use of the rates of decline used in the 19th valuation, with the exception of an initial decline in passenger employment to account for an announced reduction in Amtrak employment. For employment assumptions I and II, passenger employment of 45,000 in 1995 is assumed to decline to 43,000 in 1996, 41,000 in 1997 and remain level thereafter. For employment assumption III, passenger employment is assumed to follow the same pattern as employment assumptions I and II through 1997; after 1997, passenger employment is assumed to decline to 30,000 evenly over a 22-year period and then remain level. These assumptions are shown in Table 1.

III. RESULTS

Projections were made for the various components of income and outgo under each employment assumption for the 25 calendar years 1996-2020. The projections of these components were combined and the investment income calculated to produce the projected balances in the Railroad Retirement (RR) Account and the Social Security Equivalent Benefit (SSEB) Account at the end of each projection year. The results are summarized in Table 2.

Table 2 consists of three tables, one for each of employment assumptions I, II and III. The tables show, for each account, (1) the various elements of income and outgo, (2) the account balance on December 31, and (3) the interplay between the two accounts when the SSEB Account must transfer money to the RR Account. The tables also show combined balances for the two accounts.

Table 2 indicates that cash-flow problems do not arise under any of the three employment assumptions. The results shown in Table 2 will be discussed separately for each account.

A. Social Security Equivalent Benefit Account

The SSEB Account pays the social security level of benefits and administrative expenses allocable to those benefits, and it receives as income the social security level of taxes. If there were no other source of income or outgo during the course of a year, a surplus or deficiency would build up, depending on whether taxes exceed or are less than benefits. The SSEB Account, however, receives or pays the financial interchange transfers between the railroad retirement and social security systems. The financial interchange transfer, subject to the qualification in the next paragraph, should be enough to extinguish any surplus or deficit for the year. The SSEB Account can thus be regarded as automatically funded, the financial interchange being the mechanism for correcting any surplus or deficiency.

The qualification mentioned in the preceding paragraph arises because, in a relatively small number of cases, the railroad retirement system does not pay benefits when the social security system would. In these cases, mainly dependent children of retired railroad employees, the SSEB Account collects an amount through the financial interchange but does not pay a corresponding benefit. This imbalance between outgo and income is small in any particular year, but over many years a substantial fund builds up. The SSEB Account must transfer money to the RR Account if (1) the balance in the RR Account is insufficient to enable it to pay benefits, and (2) the transfer will not jeopardize the payment of SSEB Account benefits. There is no requirement that these transfers be repaid.

Under each projection, if the RR Account runs into cash-flow problems, the SSEB Account is assumed to transfer enough of its accumulated funds to allow the RR Account to meet its benefit obligations. This continues until the SSEB Account's accumulated balance is exhausted. Thereafter, the SSEB Account is assumed to transfer to the RR Account any excess of income over outgo, maintaining a zero balance.

B. Railroad Retirement Account

Under employment assumption I, the RR Account balance grows throughout the projection period. Under employment assumption II, the RR Account balance grows through 2008 and then begins to decline. The account has a positive balance at the end of the projection period under both employment assumption I (Table 2-I) and employment assumption II (Table 2-II).

Under employment assumption III (Table 2-III), the RR Account balance grows through 2002 and then begins to decline. The balance would become negative in 2017 if no money were allowed to be transferred from the SSEB Account. By the end of 2016, the SSEB Account has built up a balance of \$8,611 million. The SSEB Account transfers enough money to the RR Account in 2017 and after to enable the RR Account to meet its obligations. At the end of 2020, the balance in the combined accounts represents less than one month of combined benefit payments.

C. Analysis of Results

The following table shows, for each employment assumption, the tier 2 tax rate increase needed January 1, 1997, to provide for a December 31, 2020 balance in the combined RR and SSEB Accounts equal to 50 percent of the preceding 12 months' benefit payments. Part or all of the additional funding could, of course, be achieved by reductions in benefits.

<u>Employment assumption</u>	<u>Tier 2 tax rate increase on January 1, 1997</u>
I	none
II	none
III	1.04%

The overall conclusion is that, barring a sudden, unanticipated, large decrease in railroad employment, the railroad retirement system will experience no cash-flow problems for at least 25 years. The long-term stability of the system, however, is still questionable. Under the current financing structure, actual levels of railroad employment over the coming years will largely determine whether corrective action is necessary.

D. Comparison of Results with 1995 Report

The projections contained in this report for employment assumption I are similar to last year's report. Favorable employment experience has resulted in higher combined account balances for all calendar years under employment assumptions II and III.

IV. RECOMMENDATIONS

As stated in the introduction, this report must contain recommendations with regard to (1) tax rates and (2) whether any part of the taxes on employers should be diverted to the Railroad Unemployment Insurance Account to aid in the repayment of any debt to the RR Account.

A. Tax Rates

This report recommends no change in the rate of tax imposed on employers and employees. The absence of projected cash flow problems for 25 years under each employment assumption indicates that an immediate increase in tax rates is not required. However, the continued dependence on future entrants to fund the past service costs of current and former employees, along with the low final account balance projected under employment assumption III, indicate that a decrease in tax rates may be premature.

B. Diversion of Taxes to Railroad Unemployment Insurance Account

No diversion of taxes from the Railroad Retirement Account to the Railroad Unemployment Insurance Account is recommended at this time. There are currently no loans outstanding from the Railroad Retirement Account to the Railroad Unemployment Insurance Account.

Table 1. Employment Assumptions Used in 1996 Actuarial Report

Calendar year	Average employment (Thousands)		
	I	II	III
1995	264	264	264
1996	258	254	251
1997	251	245	239
1998	247	238	228
1999	243	231	218
2000	239	224	209
2001	235	218	200
2002	231	212	191
2003	227	206	183
2004	224	200	176
2005	220	194	168
2006	216	189	161
2007	213	184	154
2008	209	179	148
2009	206	174	142
2010	203	169	136
2011	200	165	130
2012	196	161	125
2013	193	156	120
2014	190	152	115
2015	187	148	111
2016	184	145	106
2017	181	141	102
2018	179	138	98
2019	176	134	94
2020	173	131	91

Table 2-I. Progress of the Railroad Retirement (RR) and Social Security Equivalent Benefit (SSEB) Accounts under: Employment Assumption I
(Dollar amounts in millions)

Calendar year	Railroad Retirement Account				Social Security Equivalent Benefit Account				Combined RR and SSEB balance, end of year
	Benefits and admin- istration	Tax income <u>1/</u>	Other income <u>2/</u>	Balance, end of year	Benefits and admin- istration	Tax income <u>3/</u>	Other income and expense <u>4/</u>	Balance, end of year	
1996	\$2,941	\$2,540	\$718	\$12,140	\$4,976	\$1,926	\$3,044	\$1,847	\$13,987
1997	2,973	2,562	795	12,523	5,043	1,945	3,273	2,022	14,545
1998	3,021	2,599	818	12,919	5,113	1,975	3,324	2,209	15,128
1999	3,072	2,646	842	13,335	5,198	2,013	3,383	2,407	15,742
2000	3,117	2,694	867	13,778	5,279	2,052	3,439	2,619	16,397
2001	3,161	2,743	893	14,254	5,349	2,091	3,483	2,844	17,098
2002	3,211	2,794	922	14,759	5,410	2,130	3,520	3,084	17,843
2003	3,268	2,845	952	15,288	5,472	2,169	3,557	3,338	18,626
2004	3,328	2,896	979	15,836	5,542	2,208	3,604	3,609	19,445
2005	3,392	2,949	1,000	16,392	5,622	2,248	3,662	3,897	20,289
2006	3,467	3,004	1,031	16,960	5,710	2,287	3,730	4,204	21,164
2007	3,558	3,060	1,064	17,527	5,805	2,327	3,804	4,530	22,057
2008	3,660	3,117	1,098	18,082	5,915	2,366	3,896	4,877	22,959
2009	3,766	3,175	1,129	18,620	6,057	2,405	4,022	5,246	23,866
2010	3,875	3,235	1,144	19,124	6,227	2,446	4,175	5,640	24,764
2011	3,992	3,298	1,168	19,599	6,411	2,489	4,342	6,060	25,659
2012	4,114	3,364	1,191	20,041	6,613	2,535	4,526	6,508	26,549
2013	4,235	3,433	1,215	20,453	6,836	2,583	4,731	6,985	27,438
2014	4,355	3,504	1,238	20,839	7,076	2,633	4,952	7,494	28,333
2015	4,470	3,579	1,254	21,201	7,323	2,688	5,178	8,037	29,238
2016	4,577	3,656	1,256	21,537	7,579	2,746	5,412	8,616	30,153
2017	4,672	3,737	1,276	21,878	7,834	2,808	5,643	9,232	31,110
2018	4,753	3,822	1,296	22,244	8,084	2,875	5,866	9,889	32,133
2019	4,814	3,910	1,319	22,660	8,322	2,946	6,075	10,588	33,248
2020	4,855	4,003	1,346	23,153	8,538	3,023	6,259	11,332	34,485

1/ Includes payroll taxes, income taxes on benefits and tax transfers from Railroad Retirement Supplemental Account.

2/ Includes interest income and repayment of loans made to Dual Benefits Payments Account and Railroad Retirement Supplemental Account.

3/ Includes payroll taxes and income taxes on benefits.

4/ Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues.

Table 2-II. Progress of the Railroad Retirement (RR) and Social Security Equivalent Benefit (SSEB) Accounts under: Employment Assumption II
(Dollar amounts in millions)

Calendar year	Railroad Retirement Account				Social Security Equivalent Benefit Account				Combined RR and SSEB balance, end of year
	Benefits and administration	Tax income <u>1/</u>	Other income <u>2/</u>	Balance, end of year	Benefits and administration	Tax income <u>3/</u>	Other income and expense <u>4/</u>	Balance, end of year	
1996	\$2,941	\$2,523	\$718	\$12,122	\$4,976	\$1,913	\$3,056	\$1,847	\$13,969
1997	2,973	2,518	792	12,459	5,043	1,912	3,306	2,022	14,481
1998	3,021	2,530	812	12,780	5,113	1,923	3,376	2,209	14,989
1999	3,072	2,551	830	13,089	5,198	1,941	3,455	2,407	15,496
2000	3,117	2,571	848	13,392	5,279	1,959	3,531	2,619	16,011
2001	3,161	2,592	866	13,689	5,349	1,976	3,598	2,844	16,533
2002	3,211	2,613	882	13,973	5,410	1,993	3,657	3,084	17,057
2003	3,268	2,633	898	14,238	5,472	2,008	3,718	3,338	17,576
2004	3,328	2,654	909	14,473	5,542	2,023	3,790	3,609	18,082
2005	3,392	2,674	910	14,664	5,622	2,037	3,873	3,897	18,561
2006	3,467	2,696	918	14,811	5,710	2,050	3,966	4,204	19,015
2007	3,557	2,718	925	14,896	5,804	2,063	4,067	4,530	19,426
2008	3,660	2,740	929	14,905	5,913	2,075	4,185	4,877	19,782
2009	3,765	2,762	926	14,827	6,054	2,086	4,337	5,246	20,073
2010	3,874	2,784	903	14,641	6,220	2,097	4,517	5,640	20,281
2011	3,990	2,809	884	14,345	6,402	2,111	4,711	6,060	20,405
2012	4,111	2,836	860	13,931	6,599	2,125	4,921	6,507	20,438
2013	4,231	2,864	831	13,395	6,816	2,141	5,152	6,984	20,379
2014	4,349	2,894	796	12,736	7,048	2,159	5,398	7,493	20,229
2015	4,461	2,926	749	11,949	7,288	2,179	5,650	8,035	19,984
2016	4,565	2,960	681	11,025	7,533	2,203	5,908	8,613	19,638
2017	4,657	2,996	623	9,988	7,777	2,230	6,163	9,229	19,217
2018	4,733	3,035	560	8,850	8,014	2,260	6,410	9,884	18,734
2019	4,787	3,077	491	7,632	8,238	2,294	6,642	10,582	18,214
2020	4,822	3,121	419	6,350	8,439	2,333	6,848	11,324	17,674

1/ Includes payroll taxes, income taxes on benefits and tax transfers from Railroad Retirement Supplemental Account.

2/ Includes interest income and repayment of loans made to Dual Benefits Payments Account and Railroad Retirement Supplemental Account.

3/ Includes payroll taxes and income taxes on benefits.

4/ Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues.

Table 2-III. Progress of the Railroad Retirement (RR) and Social Security Equivalent Benefit (SSEB) Accounts under: Employment Assumption III
(Dollar amounts in millions)

Calendar year	Railroad Retirement Account				Social Security Equivalent Benefit Account				Transfers from SSEB to RR	Balance after transfers from		Combined RR and SSEB balance, end of year
	Benefits and administration	Tax income <u>1/</u>	Other income <u>2/</u>	Balance, end of year <u>3/</u>	Benefits and administration	Tax income <u>4/</u>	Other income and expense <u>5/</u>	Balance, end of year <u>6/</u>		SSEB to RR	SSEB	
1996	\$2,941	\$2,506	\$717	\$12,105	\$4,976	\$1,901	\$3,069	\$1,847		\$12,105	\$1,847	\$13,952
1997	2,973	2,474	790	12,396	5,043	1,880	3,339	2,022		12,396	2,022	14,418
1998	3,021	2,459	806	12,640	5,113	1,870	3,429	2,209		12,640	2,209	14,849
1999	3,072	2,452	819	12,840	5,198	1,867	3,530	2,407		12,840	2,407	15,247
2000	3,117	2,444	830	12,996	5,279	1,862	3,628	2,619		12,996	2,619	15,615
2001	3,161	2,435	837	13,107	5,349	1,857	3,718	2,844		13,107	2,844	15,951
2002	3,211	2,425	842	13,163	5,410	1,850	3,800	3,084		13,163	3,084	16,247
2003	3,268	2,415	843	13,153	5,472	1,841	3,885	3,338		13,153	3,338	16,491
2004	3,328	2,404	837	13,066	5,542	1,831	3,981	3,609		13,066	3,609	16,675
2005	3,392	2,392	817	12,882	5,622	1,820	4,089	3,897		12,882	3,897	16,779
2006	3,467	2,381	801	12,597	5,710	1,809	4,208	4,204		12,597	4,204	16,801
2007	3,557	2,369	782	12,191	5,803	1,795	4,334	4,530		12,191	4,530	16,721
2008	3,660	2,358	755	11,645	5,911	1,780	4,477	4,877		11,645	4,877	16,522
2009	3,764	2,345	718	10,943	6,050	1,764	4,655	5,246		10,943	5,246	16,189
2010	3,873	2,333	656	10,060	6,214	1,748	4,860	5,640		10,060	5,640	15,700
2011	3,988	2,322	595	8,989	6,392	1,733	5,078	6,060		8,989	6,060	15,049
2012	4,107	2,312	523	7,718	6,584	1,718	5,313	6,507		7,718	6,507	14,225
2013	4,226	2,303	442	6,236	6,795	1,705	5,568	6,984		6,236	6,984	13,220
2014	4,342	2,294	349	4,536	7,020	1,692	5,837	7,492		4,536	7,492	12,028
2015	4,452	2,286	238	2,608	7,251	1,681	6,111	8,034		2,608	8,034	10,642
2016	4,553	2,280	100	436	7,486	1,673	6,391	8,611		436	8,611	9,047
2017	4,641	2,276	(33)	(1,963)	7,718	1,667	6,666	9,225	\$1,906	0	7,262	7,262
2018	4,711	2,273	(179)	(4,581)	7,942	1,664	6,933	9,880	2,427	0	5,299	5,299
2019	4,760	2,273	(338)	(7,406)	8,152	1,665	7,183	10,576	2,476	0	3,170	3,170
2020	4,787	2,280	(508)	(10,421)	8,336	1,673	7,404	11,317	2,496	0	896	896

1/ Includes payroll taxes, income taxes on benefits and tax transfers from Railroad Retirement Supplemental Account.

2/ Includes interest income and repayment of loans made to Dual Benefits Payments Account and Railroad Retirement Supplemental Account.

3/ For 2017 and later, balance is before transfers from SSEB Account.

4/ Includes payroll taxes and income taxes on benefits.

5/ Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues.

6/ For 2017 and later, balance is before transfers to RR Account.